Friday, November 15, 2013

City of Houston
Public Works and Engineering Department
Standards Review Committee
Submitted via email to standardsreviewcommittee@houstontx.gov

Honorable Committee Members,

Thank you for all that you do to improve the quality of life for all the people of Houston. We appreciate this opportunity for public input on the City of Houston Public Works and Engineering Infrastructure Design Manual (IDM) with a focus on pedestrians.

These are exciting times for Houstonians following the announcement of Mayor Annise Parker’s Complete Streets Executive Order, directing all employees of the City of Houston to take every opportunity to build Complete Streets as the default option - prioritizing the safety and comfort of all users. On October 10, 2013, announcing her Complete Streets Executive Order, Mayor Parker explained what this can mean for the City of Houston:

“Houston streets can and should accommodate the needs of all users, not just those behind the wheel

... Houston is a city that embraces its diversity and the complete streets policy takes that same view and applies it to our mobility system, meeting the diverse needs of all Houstonians while creating more accessible and attractive connections to residential areas, parks, businesses, restaurants, parks, and employment centers. Its also important to keep in mind that Complete Streets help build healthy communities in many ways.”

... Frankly, it’s always been possible to do a Complete Street in Houston, but the default has been let’s get those cars moving. Now we want the default to be a Complete Street and anything different than that to be something that has to be the exception.

... We have to re-imagine Houston’s streets for all users as we work to build new and improve existing streets, sidewalks, pedestrian crossings, bike trails, lanes, and public transit.”

To achieve Mayor Parker’s vision, we believe that all of the following elements should be introduced or reconsidered in the current rewrite of the City of Houston Public Works and Engineering Design Manual:

- Curb cuts and curb radii
- Bulb outs
Mid block crossings
- Bike lane design
- Lane width
- Bike boxes
- On street protected bike lanes
- Mid block pedestrian crossings
- Number of automobile travel lanes
- Design and connectivity of off street hike and bike facilities
- Traffic calming strategies
- Default sidewalk width
- Additional street classifications
- Target speed

To achieve the goal of making Complete Streets the default, the following section (10.06.A.2.C) of the IDE needs to be changed:

Where existing conditions or proposed adjacent development warrant the consideration of alternatives to serve specific needs such as enhanced pedestrian environments, on-street parking, and bicycle traffic, optional design sections are available in the CMP. Examples of these optional design sections are shown in Appendix 2 of this chapter.

Once the COH PWE Design Manual has been rewritten to provide safe streets for all users as the default, this should be rewritten to something like the following:

Where existing conditions or proposed adjacent development warrant the consideration of alternatives to serve specific needs such as prioritization of automobile speed, freight access, or public safety concerns, optional design sections are available in the CMP. Examples of these optional design sections are shown in Appendix 2 of this chapter.

The beginning assumption should be that all streets in the City of Houston have enhanced pedestrian environments, bicycle traffic, and all the elements of Complete Streets. We are not aware of a neighborhood in Houston that deserves less.

Houston Tomorrow and the other members of the Houston Coalition for Complete Streets do not claim to be traffic engineers and are not attempting to suggest all or even a small amount of the changes to the IDM that we believe should come about as part of the shift to Complete Streets. We believe that PWE can and should do the actual engineering work and figure out how to implement the Mayor’s vision over a reasonable amount of time.

We primarily hope with this letter to support Mayor Parker’s actions and the work that we understand the staff of the Public Works and Engineering and Planning and Development Departments have done over the last year to bring the City to an historic act. We hope that the IDM can be analyzed and rewritten to achieve the vision of Complete Streets as enumerated by Mayor Parker. The following are some of the specific concerns we hope can be addressed along with the general Complete Streets approach in this process.

**Target speeds should replace design and operations speeds**

In front of our office at 3015 Richmond, the typical driver is going over 40 miles per hour, with many traveling on one of Houston’s most important urban, mixed use corridors at over 50 miles an hour. The speed limit on
this street is posted as 35 mph, but the actual design of the street accommodates and actually encourages higher speeds. The average risk for severe injury for a pedestrian struck by a vehicle is 25% at 23 mph, but reaches 75% at 50 mph, making the high speed travel on Richmond a serious health threat both as a direct threat to existing pedestrians and by discouraging the option of walking. (According to https://www.aaafoundation.org/sites/default/files/2011PedestrianRiskVsSpeed.pdf)

This point seems to be best put on page 100 of the draft City of Dallas Complete Streets Design Manual, which was presented to the City Council Transportation and Trinity River Committee (http://dallascityhall.com/development_services/CompleteStreets.html):

AASHTO identifies functional classification and design speed as primary factors in determining highway design criteria. Although design speed used to be defined as the “maximum safe speed,” FHWA’s flexibility in Highway Design recommends that design speed take into account topography, anticipated operating speed, adjacent land use, and functional design. Currently AASHTO defines operational speed as the speed at which drivers are observed operating their vehicles during free-flow conditions.

Design controls in the application of Complete Streets principles that may be used differently than in the conventional design process include speed, location, design vehicle, and functional classification. The Institute of Transportation Engineers (ITE) recommends replacing design speed with target speed. Target speed is the highest speed at which vehicles should operate on a thoroughfare in a specific context, consistent with the level of multimodal activity generated by adjacent land uses, to provide both mobility for motor vehicles and a safe environment for pedestrians, bicyclists, and public transit users. The target speed is intended to be designed as the posted speed limit. Traditionally, the speed limit is established based on the operational speed of the roadway defined as the 85th percentile speed. The posted speed limit is generally 5-10mph less than the design speed or equal to or less than the operational speed. Therefore, it is important for the design of the thoroughfare to encourage actual operating speeds that are equal to the target speed.

In this manual, design speed and operational speed are replaced with target speed, which becomes the primary control for determining the following geometric design values:

- minimum intersection sight distance,
- minimum sight distance on horizontal and vertical curves, and
- horizontal and vertical curvature.

Target speed ranges from 25 to 40 mph for the primary thoroughfare types described in this manual. A lower target speed is an essential characteristic of thoroughfares in walkable, mixed-use urban areas.

**Midblock crossings and other explicit pedestrian prioritized elements**

Houston lacks good pedestrian infrastructure and this design decision discourages good driver behavior and the option of walking and biking. Recently we have seen the introduction of high quality pedestrian design elements in areas that have been rebuilt in relation to light rail deployment, especially the pedestrian crosswalk at the Fulton/North Central station. The IDM needs to provide guidance for widespread deployment of high quality pedestrian infrastructure such as this in a variety of contexts. Successful deployment of this type of project will not only mean greater safety at that location, but will educate the people of Houston that the city does in fact value pedestrians.
Similarly, COH needs to adopt a painting scheme for bike infrastructure that does a better job of showing explicitly bike infrastructure as well as emphasizing potential conflict points. Many cities in the US have moved to painting the entire bike lane green or painting all conflict points green and doing things like bike boxes at intersections with the entire box painted green. This type of infrastructure is very affordable, will make using the streets safer and easier for drivers and bicyclists, and will show to the public that the City values bicycle riders on our streets.

**Street Classifications**
The introduction of the transit corridor as a new street classification and the proposed multimodal street classification system are great steps forward, but we believe further street classifications are necessary, including neighborhood greenways, non-motorized infrastructure - both off street hike and bike trails and pedestrian mall type situations, and high activity urban streets. We believe that further work is also necessary to make the existing street classifications safer for all users, such as using smaller and fewer lanes as reasonable options in the default scenarios and applying some of the high quality pedestrian and bicycle infrastructure principles noted below to all types of streets.

**Neighborhood greenways**
Cities across the nation have been investing in bicycle boulevards and neighborhood greenways type infrastructure, often at a fraction of the expense of other infrastructure. Houston Tomorrow and the Houston Coalition for Complete Streets have been advocating for the City of Houston to build a Neighborhood Greenways network modeled after the City of Portland Neighborhood Greenways project, which is expected to succeed connecting 85% of the households in the City to a safe grid network of streets for only $50 million over 5 years.

Portland is home to about 600,000 people, similar to Houston’s inner loop as well as the area of the same size immediately to the West of the loop, the urban core of the Houston region. Houston Tomorrow is now building a partnership and seeking funding to develop a $100 million proposal for the Houston-Galveston Area Council Transportation Improvement Program 2015 Call for Projects to connect half of the residents of the City of Houston with a safe streets network.

The primary elements of the proposed Neighborhood Greenways are efficient, affordable additions to the existing local street network, including water quality improving bioswales as end of block bulbouts, other traffic calming elements, rearranging stop signs to allow continuous bicycle riding for up to fifteen blocks, pedestrian and bicyclist wayfinding signage, sharrows, and context sensitive additions, such as pedestrian and bicycle median refuge areas when the network crosses busier streets.

We believe that the IDM should accommodate such infrastructure possibilities as well as providing neighborhoods with a full suite of options for traffic calming and designing their own infrastructure.

**Non-motorized infrastructure**
As far as we can tell, the IDM does not contain guidelines for the development of the planned half billion dollar Bayou Greenways off road hike and bike infrastructure system. Lacking reasonable guidelines for developing this infrastructure may lead to more illogical and wasteful problems, like the existing instances of trails that suddenly end into a field, such as many examples near Herman Park. The IDM should respect this major infrastructure investment with proper guidance to maximize the public’s investment. Special attention should also be applied to the proposed Utility Line Easement Hike and Bike Trails.

While there are few examples today in Houston, public streets restricted to non-motorized vehicles and pedestrians, such as the downtown pedestrian mall and the new pedestrian esplanade on Navigation, should
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serve as an element of Houston’s future development, where things like pedestrian-only retail alleys can contribute to a neighborhood or major center. The IDM should treat such infrastructure as perfectly normal.

**High activity urban streets**

While we believe that all streets in the City of Houston should be designed to accommodate pedestrians, a priority classification should be established to accommodate Houston’s job centers, universities, and high density residential areas, as well as near schools, major public facilities and services, and facilities for the disabled, elderly, and other users more reliant on access to safe pedestrian environments.

One example is Cullen within and near the University of Houston. Over 35,000 students, 3,500 faculty, staff, and visitors make the University an area where pedestrian environment should be the strong priority of transportation planning and investment. On campus and nearby housing of students continues to grow and the University’s long range planning calls for greater density of housing at the campus. Should Cullen remain a street designed with automobile speed and access paramount, these efforts will suffer.

Redesigning Cullen to be a Complete Street will support the investment in the Southeast Light Rail Line, the University of Houston’s long-range vision, and the health and safety of the students, faculty, and staff of our tier one public university. Similar consideration should be given to the entire area around UH and Texas Southern University as well as other institutions of higher learning across the City.

Another example is Houston’s major job centers. Downtown has long enjoyed a higher level of pedestrian infrastructure than the rest of the Houston region. Houston’s other major job centers should receive the same pedestrian level of service to support transit mode share, reduce automobile trips by providing meaningful access to local restaurants and other trip generators, and provide equitable access to Houston’s major job centers to all the people of Houston.

**Source materials**

The design of urban streets has progressed rapidly in the last decade with many cities replacing older guidelines with modern ones that balance the needs of all users. The National Association of City Transportation Officials (NACTO) recently published their 'Urban Street Design Guide' which details how to design for streets that meet Complete Streets standards and provide for the needs of all users and modes of transportation. We believe the NACTO guide should be included as an official reference under Section 10.02 (in addition to AASHTO) and should be utilized when designing for streets, intersections, sidewalks, bike lanes, and stormwater management improvements.

Another key source material that is referenced in one line in the IDM is the ITE recommended practice for estimating traffic impact. The state of the art is that the new MXD method is replacing the previous ITE method of estimating traffic impact analysis for mixed-use developments, as the old method has been shown to greatly overestimate the traffic impact of mixed-use developments. Currently, the IDM forces developers to use the outdated method that inaccurately predicts higher traffic counts than will really occur following development of a mixed use development. This may be having a serious detrimental perverse effect on the development marketplace in Houston, limiting mixed-use development, a key element of making Houston inviting to pedestrians, especially in the context of the further development of the most successful modern light rail system in the nation – in terms of ridership per mile of investment. We recommend simply allowing project developers to use the MXD method when appropriate (For more information: http://www.fehrandpeers.com/mxd/) and believe that this change will assist in making Houston a more attractive place for pedestrians and encourage economic development and tax base.

Houston Tomorrow is dedicated to improving the quality of life for all the people of the Houston region.
Locally, there have been many attempts to contextual the Complete Streets movement to Houston’s particular needs. Attached to these comments, we are including the following, which we believe should also be instructive to this process:

Citizens’ Transportation Coalition
“Complete Streets and Prop1/Renew Houston,” December 2010

Houston Coalition for Complete Streets
“Toward Complete Streets for Houston,” June 2012

Houston Tomorrow
“Houston Neighborhood Greenways,” June 2013

Houston Tomorrow and the 33 member organizations of the Houston Coalition for Complete Streets eagerly await further opportunities for input and would love to serve in any capacity the Committee may find helpful to this process. Thank you very much for this opportunity and for all the work you are doing to make Houston a safer place for all the people of Houston.

Sincerely,

Jay Blazek Crossley
Program Development and Research